

Digital Coast and the Multipurpose Marine Cadastre

Josh Murphy
IOCM Inventory Meeting
January 12, 2011

Agenda

Digital Coast

- Purpose, goals and mission
- Geospatial data services provided
- Data types
- Data Coverage / Gaps
- Success stories
- Multipurpose Marine Cadastre

Digital Coast

- **Approach:** Bring the geospatial and coastal management communities together
- **Outcome:** A constituent-driven, integrated, enabling platform supporting coastal resource management

Digital Coast Partnership



NSGIC



*National States Geographic
Information Council*



NOAA Coastal Services Center
LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

DIGITAL COAST



NOAA Coastal Services Center
LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

Digital Coast Contributors

Mississippi State Coordinating Council
on Remote Sensing and GIS
NOAA National Geodetic Survey
U.S. Army Corps of Engineers
U.S. Geological Survey
NASA/NOAA/USGS Airborne Lidar
Assessment of Coastal Erosion (ALACE)
Federal Emergency Management Agency
National Geospatial-Intelligence Agency
U.S. Department of Agriculture
Northwest Florida Water
Management District
Southwest Florida Water
Management District
St Johns River Water Management District

Maryland Department of Natural Resources
Oregon Department of Geology
and Mineral Resources
Texas Natural Resources Information System
Mississippi Department of
Environmental Quality
Scripps Institute of Oceanography
University of Texas
Delaware Department of Natural Resources
and Environmental Control
South Carolina Department of
Natural Resources
Florida Division of Emergency Management
Minnesota Department of Natural Resources
Management Association for Private
Photogrammetric Surveyors (MAPPS)

More than just data...

The Digital Coast also provides the tools, training, and information needed to turn these data into the information most needed by coastal resource management professionals. [Read more...](#)

Welcome to the new Digital Coast. If you have questions or comments, please [contact us](#).

Data

Learn more about the kinds of data available and download data.

Tools

Use these tools to turn data into the useful information your organization needs.

Training

Update your skills by participating in one of these training programs.

In Action

See how data and tools are used to address coastal management issues.

Approaches

In this section, Digital Coast resources are packaged in a way that best assists coastal communities working to address a specific issue.

Coastal Inundation Toolkit

Understand the basics and get the tools that will help make your community more resilient.

Offshore Renewable Energy Planning

Get the data and tools needed to make siting decisions.

Featured Resources

Building Resilient Coastal Communities

See how coastal counties can use Digital Coast to build resilient communities.

Mississippi Geospatial Clearinghouse

A comprehensive spatial information warehouse of geographic information system (GIS) resources for Mississippi for use by government, academia, and the private sector.

Recent Updates [✉ Sign up for updates](#)

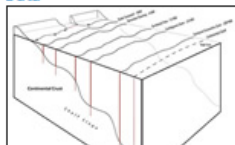
Tools



[Topographic and Bathymetric Data Inventory](#)

Enables users to locate

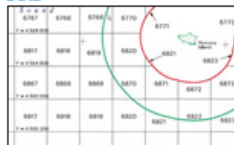
Data



[Marine Jurisdictions](#)

Authoritative U.S. marine boundaries depicting the extent of

Data



[Outer Continental Shelf Lease Blocks](#)

Authoritative U.S. marine boundaries

Testimonials

“Digital Coast has a real role in standards, guidelines, specifications for elevation data, datums, and inundation mapping.”

Staff member, NOAA National Marine Sanctuaries

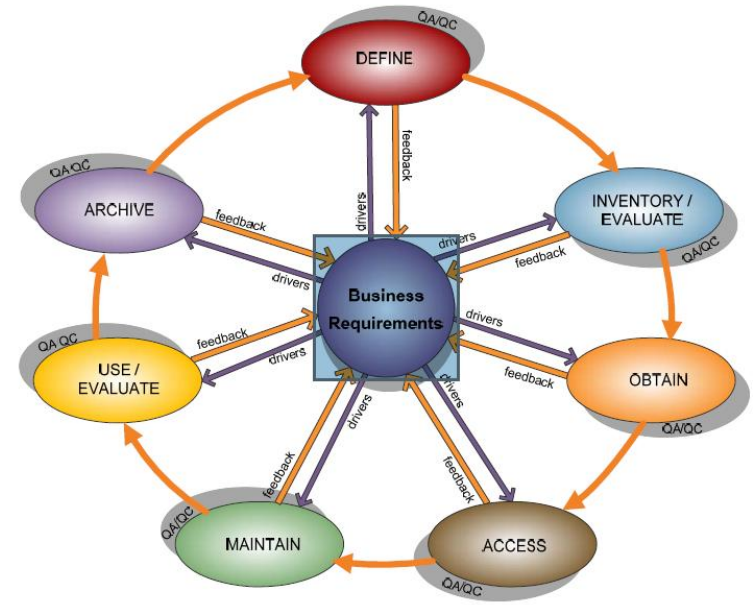
If you have content to submit to the Digital Coast, let us

Providing Geospatial Solutions

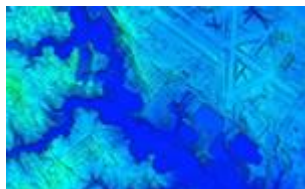
- Coastal data
- Data accessibility
- Techie and non-techie tools
- Training
- Outreach and Awareness

Linkages to FGDC Lifecycle

- Digital Coast Partnership
 - Define User Requirements
- Coastal data
 - Obtain, Access, Maintain, Use/Evaluate
- Data accessibility
 - Inventory/Evaluate



Data Types



Coastal Lidar



Coastal Change Analysis Program
(C-CAP) Land Cover



High-resolution Orthoimagery



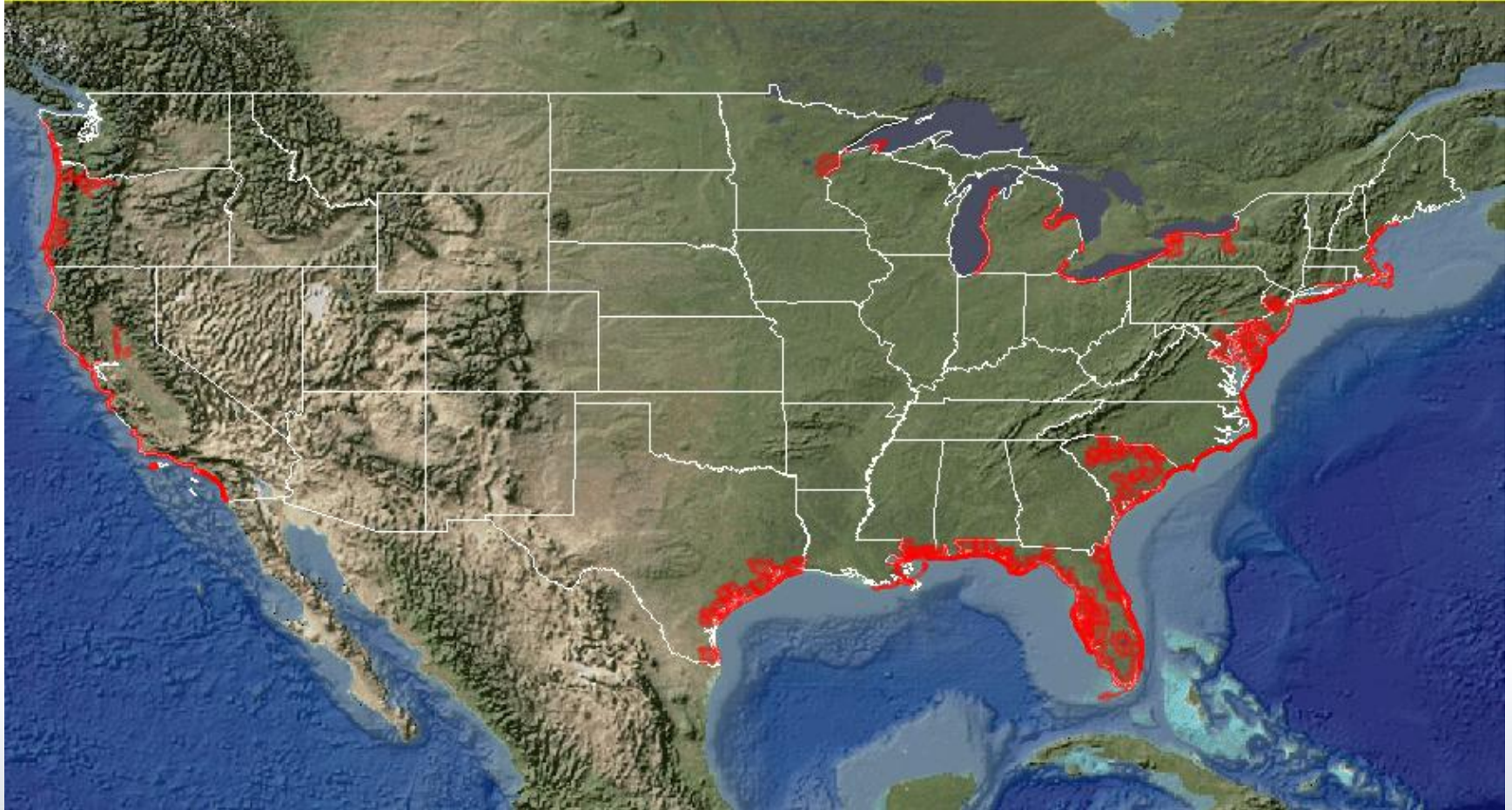
Benthic

Data Coverage/Gaps

- **Coastal Lidar**
 - Coverage includes: various coastal areas and adjacent counties
- **Coastal Change Analysis Program (C-CAP) Land Cover**
 - Coverage includes: Coastal intertidal areas, wetlands, and adjacent uplands of the contiguous U.S., Puerto Rico, the U.S. Virgin Islands, Hawaii, and the Pacific Islands territories
- **High-resolution Orthoimagery**
 - Coverage includes: Coastal Connecticut, Texas, Florida, South Carolina, North Carolina, and Long Island, New York
- **Benthic**
 - Coverage includes: Individual bay systems to entire state coastlines throughout the East and Gulf coasts plus Willapa Bay, Washington.

Data Coverage/Gaps

- Coastal Lidar



Data Coverage/Gaps

- Land Cover



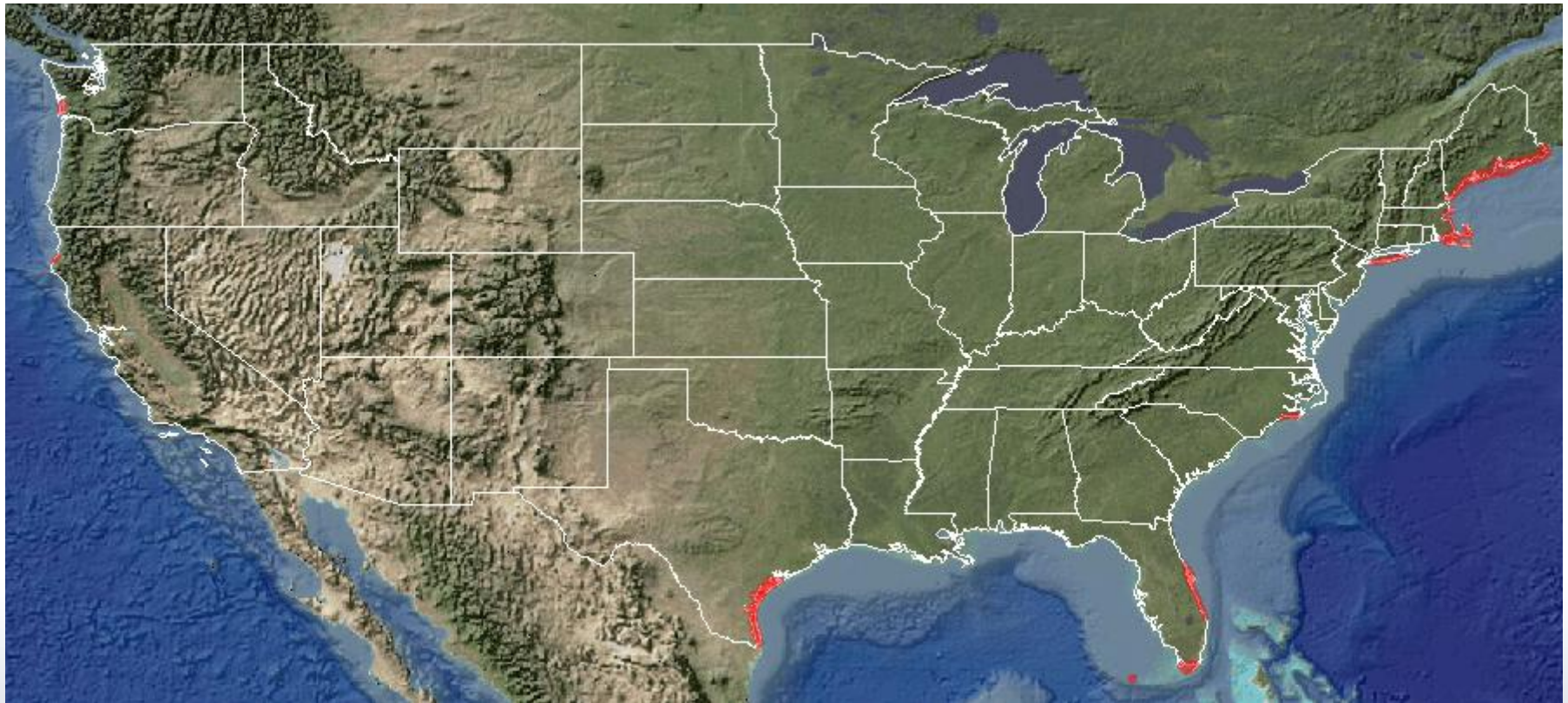
Data Coverage/Gaps

- Orthoimagery



Data Coverage/Gaps

- Benthic



Success stories

- **Digital Coast in Action:**
 - <http://www.csc.noaa.gov/digitalcoast/action/index.htm>
- **“Building Resilient Coastal Communities: Counties and the Digital Coast”**
 - http://www.csc.noaa.gov/digitalcoast/inundation/pdf/Issue_brief.pdf

Agenda

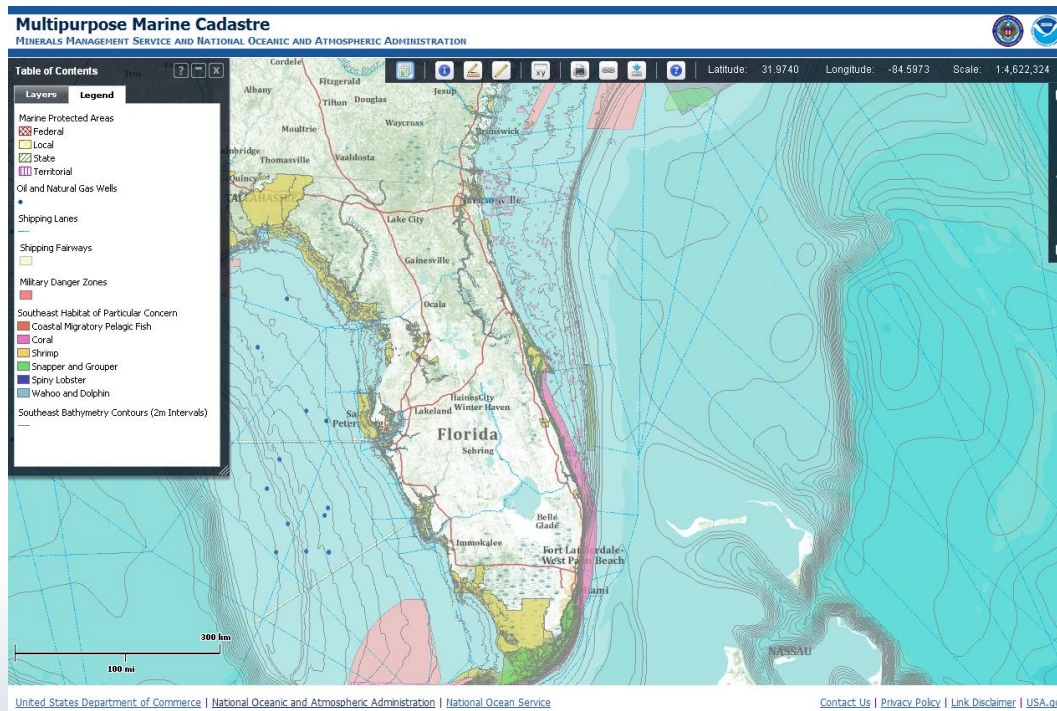
- Digital Coast

Multipurpose Marine Cadastre

- Purpose, goals and mission
- Geospatial data services provided
- Data types
- Data Gaps
- Success stories

Multipurpose Marine Cadastre

- A marine information system for the outer continental shelf and state waters that provides a data framework to support decision making.



Geospatial Solutions

The screenshot shows the Marine Cadastre web portal. At the top, there are logos for NOAA and the Department of Commerce, and navigation links: MMC Home, About, Partnerships, Data, In Practice, and Support. The main heading is "Multipurpose Marine Cadastre" with the subtitle "Your Source for Authoritative Ocean Data". Below this, there are three bullet points: "View and explore national-scale boundary, cadastral, and other ocean data", "Analyze data, produce and share a map", and "Download data from its original source". A prominent orange button says "Launch the Viewer". To the right of the text is a thumbnail image of the web viewer interface showing a map of the United States with various colored overlays. Below the main heading, a section titled "Multipurpose Marine Cadastre (MMC) Version 2.0 Now Available" describes the new version's features, including better performance using ArcServer and Flex, additional marine habitat and seafloor data, and more intuitive tool design. A "Launch the Viewer >" link is provided. At the bottom, there are three columns: "Data" (Access and download data layers contained within the MMC. More >), "Support" (Explore frequently asked questions and other supporting documents. More >), and "In Practice" (See how the MMC is currently being used. More >).

Authoritative Framework Data

- Web Portal
- Web Services

National Viewer

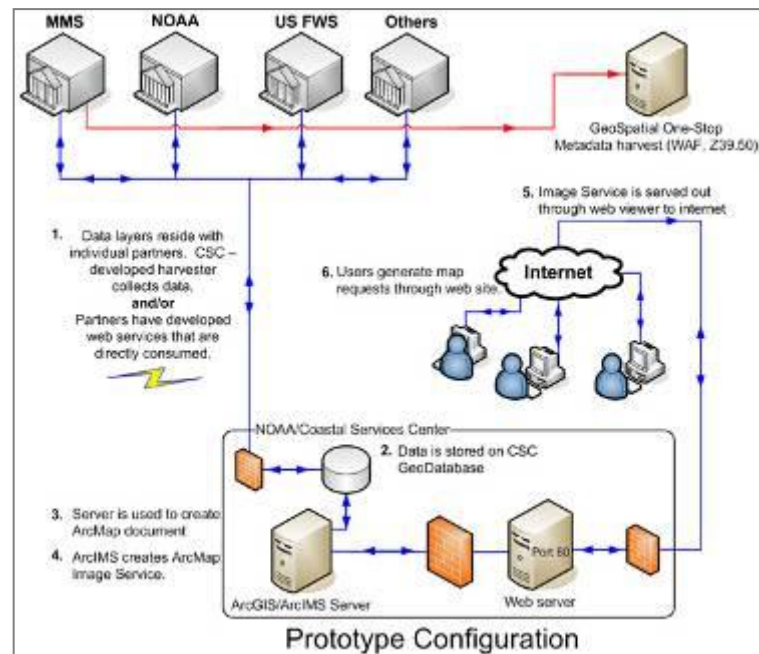
- Web mapping
- Data Analysis
- Map production

Regional and State Support

- Best Practices
- Templates and code
- Consultation

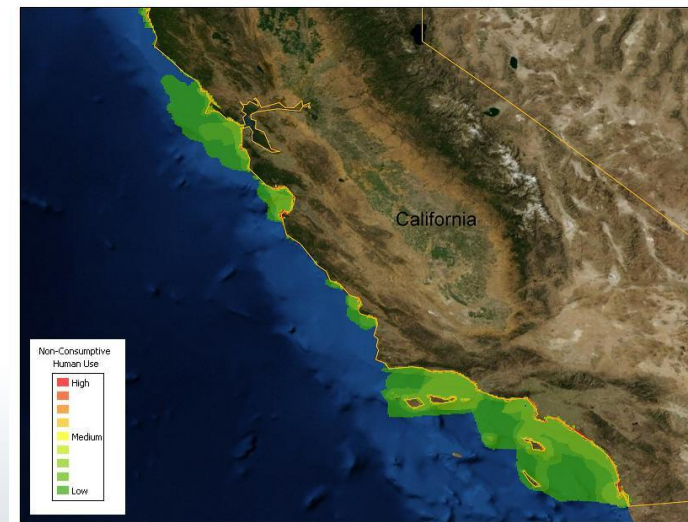
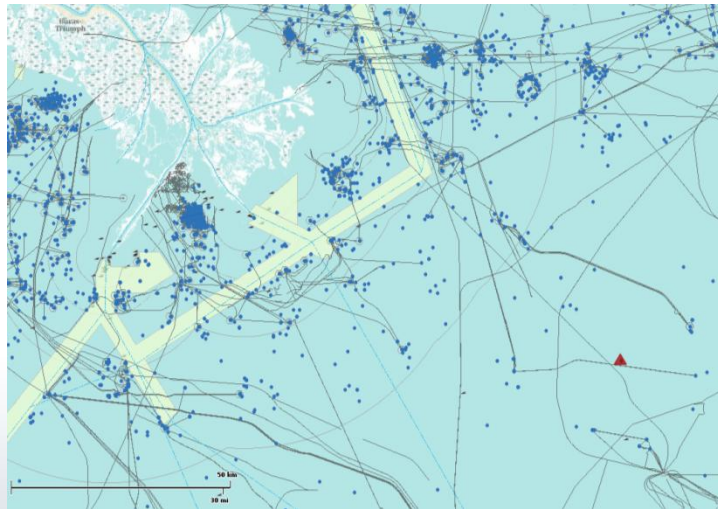
MMC Data Management and Access

- Data is managed and maintained by the authoritative source
- CSC harvests on a periodic basis to keep the viewers up to date
- Access to data is provided via the Marine Boundary Working Group data portal
- Working on a series value added data services
 - Core marine cadastre
 - Marine Infrastructure
 - Georegulations



Data Types

- Jurisdictional Boundaries and Limits
- Federal Georegulations
- Geology and Seafloor Data
- Human Use Data
- Marine Habitat and Biodiversity



Data Providers

- **BOEMRE**
- **NOAA Office of Coast Survey**
- **NOAA National Marine Sanctuaries**
- **NOAA Marine Protected Areas**
- **NOAA Fisheries**
- **U.S. Fish and Wildlife Service**
- **National Park Service**
- **Department of Defense (DoD)**
- **Coast Guard**
- **Federal Energy Regulatory Commission**

Data Gaps

- Human Use Data
- Geology and Seafloor Data
- Marine Habitat and Biodiversity

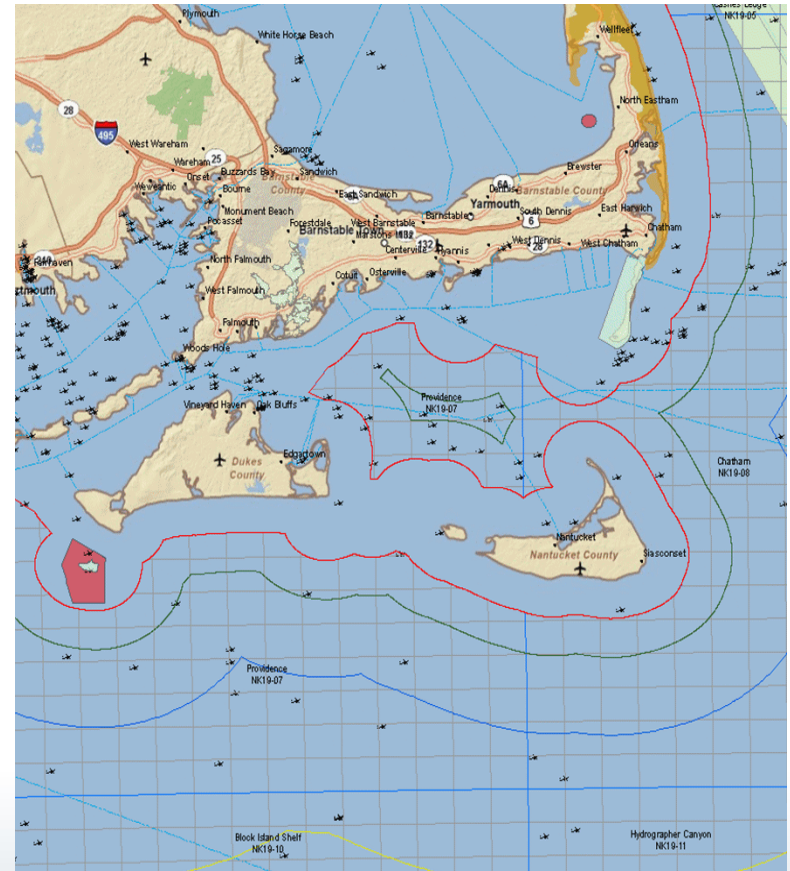
Success Stories

Issue: Alternative Energy Development on the OCS

Partners: Bureau of Ocean Energy Management and NOAA CSC

Task: Develop mapping applications to support energy planning and regulations

Status: Ongoing effort



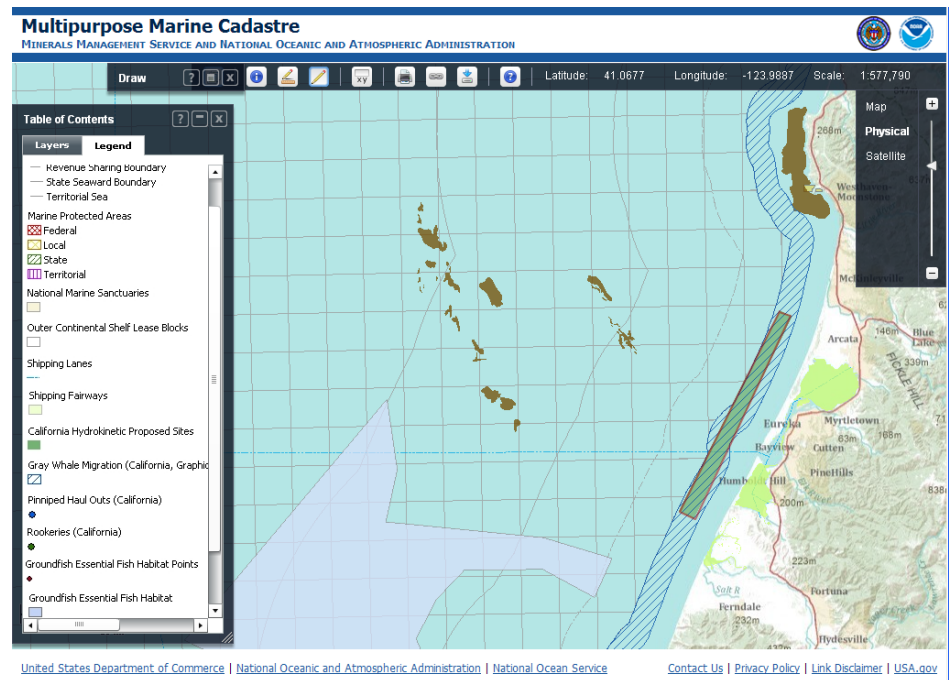
Success Stories

Issue: Need system to support hydrokinetic project permit review

Partner: NOAA NMFS Habitat Conservation Division

Task: Map critical habitat data

Status: Ongoing - exploring work with other NMFS regions



For More Information

Visit

<http://www.csc.noaa.gov/digitalcoast>

or

Contact

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See you at GeoTools 2011!